

Panel Discussion: Water Recycling and Emerging Contaminants

ECs Task Force in Region 8

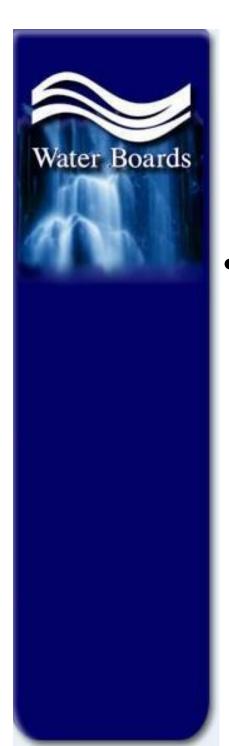
Carole Beswick, Chair
California Regional Water Quality Control
Board, Santa Ana Region

February 24, 2009



SWRCB Recycled Water Policy

- Recycled Water Policy (Policy) adopted by SWRCB on February 3rd
- Item 6(b)(1)(d) of Policy requires Regional Boards to adopt salt management plans within 5 years of adoption of Policy



Salt Management Plan Requirement

- 6(b)(3)(b) requires salt management plans to include provision for annual monitoring for Emerging Constituents or Constituents of Emerging Concern (ECs)
 - Pharmaceuticals
 - Personal care products
 - Endocrine disruptors



SWRCB Recycled Water Policy

- Policy also requires (10(b)(1))
 formation of "Blue-Ribbon" panel
 of experts to "guide future actions
 relating..." to ECs
- Panel composition:
 - Human health toxicologist
 - Environmental toxicologist
 - Epidemiologist
 - Biochemist
 - Civil engineer (recycled water)
 - Chemist (advanced lab methods)



Region 8 Activities Related to ECs

- ECs monitoring required for integrated groundwater recharge projects utilizing recycled water and/or imported water
- ECs monitoring required for POTW discharges under NPDES permits
- Based on CDPH Endnote 5 of Draft Groundwater Recharge Reuse Regulations



Region 8

- Jan 2008 Region Board approved "Cooperative Agreement" with agencies that recharge groundwater with imported water
 - Recharging Agencies will:
 - Perform 20-year projections to determine compliance with objectives
 - Complete annual ECs monitoring of imported water used for groundwater recharge



Region 8

- Issues with ECs monitoring
 - Enormous number of constituents
 - Typically very small concentrations
 - No California-approved standard methods
 - Relatively few methods of any sort
 - Different analysis methods used for same compounds (single solvent or isotope extractions, multiple solvent or isotope extractions, etc.)
 - No regulatory standards
 - Public concerns



- Concerns with ECs monitoring led to formation of ECs Task Force (or Work Group)
 - Recharging agencies that signed Cooperative Agreement
 - Members of Santa Ana River
 Dischargers Association
 - Facilitated by Risk Sciences
 - Managed by Santa Ana Watershed
 Project Authority (SAWPA, a JPA)



- ECs Task Force
 - Develop implementable monitoring programs
 - Likely to have different programs for surface water and groundwater dischargers
 - Monitoring programs for constituents that can be analyzed in most high-quality commercial labs
- ECs T.F. learns of proposed field study



OCWD/NWRI/MWDSC

- Orange County Water District,
 National Water Research Institute,
 and Metropolitan Water District of
 SoCal (OCWD/NWRI/MWDSC)
 currently undertaking statewide
 sampling and analysis program of
 ECs
 - State Water Project
 - POTWs
 - Recharge Projects
 - Surface Water Bodies



OCWD/NWRI/MWDSC

- Will provide valuable information to ECs T.F. to identify tracer constituents, surrogates, analytical process concerns and difficulties, and treatment efficiencies
- Santa Ana River Dischargers
 Association committed to continue
 OCWD/NWRI/MWDSC analyses until
 Region 8 monitoring programs are
 developed and approved by RB



- Region 8 ECs T.F. convened panel of experts
 - Dr. Shane Snyder Southern Nevada Water Authority
 - Dr. Andrew Eaton MWH Labs
 - Dr. Y. Carrie Guo MWDSC Labs
 - Nel Groenveld IEUA Labs
 - Dr. Doug Drury Clark County Water Reclamation District
 - Dr. Jorg E. Drewes Colorado School of Mines
 - Brian Bernados, P.E., CDPH



Panel of Experts

- Expert Testimony
 - Monitoring and analysis difficulties and methods
 - Treatment efficiencies
 - Public Health considerations
 - Surrogates and tracers
 - Real-world experiences
- Panel contributions provided valuable input to assist in development of monitoring programs for groundwater recharge and surface water discharges



2008 Progress Report

for the

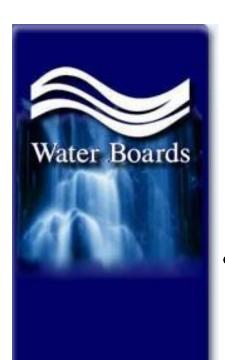
Emerging Constituents Workgroup



DRAFT December 15, 2008



- ECs T.F. expects to complete groundwater recharge and NPDES discharge monitoring programs for RB consideration in 2009
- Adaptive management approach
 - Modify programs as state of knowledge improves
- Modify programs in response to State Board panel findings, if necessary



- www.sawpa.org
 - Click on "Projects" button
 - Click on "Planning"
 - Highlight "Emerging Constituents Workgroup
- http://www.sawpa.org/projects/planning/ g/EmergeConstituent.htm
- All papers, handouts and PowerPoint presentations by experts



www.waterboards.ca.gov/santaana

